

Title (en)
POWER SEMICONDUCTOR DEVICE

Title (de)
LEISTUNGSHALBLEITERBAUELEMENT

Title (fr)
DISPOSITIF SEMI-CONDUCTEUR DE PUISSANCE

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Application
EP 13797797 A 20130409

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Abstract (en)
[origin: EP2858110A1] The present invention relates to a power semiconductor device, which performs power conversion by driving in parallel three or more power semiconductor elements, and the purpose of the present invention is to reduce variance of a voltage to be applied between the terminals of each of the power semiconductor elements, and to improve lifetime of the power semiconductor elements and reliability of the power semiconductor device. In order to achieve the purpose, in this power semiconductor device, which is provided with three or more power semiconductor elements (701-704) that are aligned and mounted on a metal wire (4), and another metal wire (5) different from the metal wire-(4), one terminal of each of the power semiconductor elements being connected to the wire (4) and another one terminal thereof being connected to the wire (5), the resistance value of the metal wire (4) in a region where the power semiconductor elements (701-704) are mounted is higher in the downstream side than that in the upstream side in the electric current flowing direction.

IPC 8 full level
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Cited by
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